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10/718,753	11/21/2003	Alexander Hoffmann	16274.171	1445

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EXAMINER
NOBAHAR, ABDULHAKIM

ART UNIT	PAPER NUMBER
2132	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/718,753	HOFFMANN, ALEXANDER
Office Action Summary	Examiner	Art Unit	
	ABDULHAKIM NOBAHAR	2132	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>21 November 2003</u>.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-35</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-35</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on <u>21 November 2003</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>04/25/2005, 11/21/2003</u>.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 17 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 17 and 18 recite "interface comprises a transmit data in line and an inverted transmit data in line" and "interface comprises a received data out line and an inverted received data out line", respectively, which have not been described in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Thomas et al (US 2003/0072059 A1; hereinafter Thomas)

Regarding claims 1, 13, 25, 29, Thomas discloses:

a host (see, e.g., [0024]; Fig. 1; [0063]);

an interface electrically coupled to the host [0063]; and

A transceiver (see, e.g., [0063]) comprising:

a transmitter configured to transmit data signals (see, e.g., [0068]);

a receiver configured to receive data signals (see, e.g., [0090]); and

a controller configured to encrypt a string and supply the encrypted string to authenticate the transceiver (see, e.g., abstract; [006]; [0024]; [0115] and claim 24).

Regarding claims 2 and 4, Thomas discloses:

The transceiver of claim 1, wherein the controller is configured to encrypt the string with a transceiver private encryption key (see, e.g., [0019]; [0063]; [0159]).

Regarding claims 3 and 28, Thomas discloses:

The transceiver of claim 1, wherein the controller is configured to use a transceiver private encryption key and a transceiver public encryption key to authenticate the transceiver (see, e.g., [0030]; [0057]; [0159]; [0178]).

Regarding claim 5, Thomas discloses:

The transceiver of claim 3, wherein the transceiver public encryption key is sealed by encrypting the transceiver public encryption key with a system private encryption key and stored as a sealed transceiver public encryption key (see, e.g., [0031]; [0148]; [0159]-[0160]).

Regarding claim 6, Thomas discloses:

The transceiver of claim 5, wherein the sealed transceiver public encryption key is decrypted with a system public encryption key to retrieve the transceiver public encryption key (see, e.g., [0165]; [0186]).

Regarding claim 7, Thomas discloses:

The transceiver of claim 1, wherein the controller comprises an electrically erasable and programmable read only memory that is used to store a transceiver private encryption key and a transceiver public encryption key (see, e.g., [0147]-[0148]) .

Regarding claim 8, Thomas discloses:

The transceiver of claim 1, wherein the controller comprises a cryptography module for encrypting the string (see, e.g., [0066]).

Regarding claim 9, Thomas discloses:

The transceiver of claim 1, wherein the controller comprises an RSA encryption module for encrypting the string (see, e.g., [0159]).

Regarding claim 10, Thomas discloses:

The transceiver of claim 1, wherein the receiver comprises a fiber optic receiver (see, e.g., [0159]).

Regarding claim 11, Thomas discloses:

The transceiver of claim 1, wherein the transmitter comprises a fiber optic transmitter (see, e.g., [0003]; [0075]).

Regarding claim 12, Thomas discloses:

The transceiver of claim 1, wherein the transceiver comprises a small form factor pluggable transceiver (see, e.g., [0212], where in a wireless environment devices such as cellular phone, PDA and laptop are used, which use small form factor transceiver)

Regarding claim 14, Thomas discloses:

The network system of claim 13, wherein the interface comprises an inter-integrated circuit bus (see, e.g., [0063] and Fig. 1, where the devices of the network are connected electrically, thus their interface component of these devices are inter-integrated circuit buses).

Regarding claims 15 and 16, Thomas discloses:

The network system of claim 13, wherein the interface comprises a transceiver fault

status line (see, e.g., [0179], where, for example, in case of a negative decision at step

1215 of Fig. 12 the "NO" branch is followed that will lead to the failure of cryptographic

operation. This indicates that the system of Thomas has a mechanism for ending the

communication which corresponds to the recited transceiver fault status line or disable

line).

Regarding claim 17, Thomas discloses:

 The network system of claim 13, wherein the interface comprises a transmit data in line

and an inverted transmit data in line (see, e.g., Figs. 1, 5 and 11).

Regarding claim 18, Thomas discloses:

The network system of claim 13, wherein the interface comprises a received data out

line and an inverted received data out line (see, e.g., Figs. 1, 5 and 11).

Regarding claim 19, Thomas discloses:

The network system of claim 13, wherein the interface comprises a loss of signal status

line (see, e.g., [0070]; 0203]; [0209]).

Regarding claim 20, Thomas discloses:

The network system of claim 13, wherein the host is one of a mainframe computer, a workstation, a server, and a storage device (see, e.g., [0071]; [0098]).

Regarding claim 21, Thomas discloses:

The network system of claim 13, wherein the host is one of a bridge, a router, a hub, a local area switch and a wide area switch (see, e.g., [0071]; [0085]; [0087]).

Regarding claim 22, Thomas discloses:

A transceiver comprising:

a transmitter configured to transmit data signals (see, e.g., [0068]);

a receiver configured to receive data signals (see, e.g., [0090]); and

a controller configured to communicate with a host to authenticate the transceiver with the host, wherein the controller comprises a first public key/private key pair for authentication (see, e.g., abstract; [0024]; [0115] and claim 24; [0159]).

Regarding claim 23, Thomas discloses:

The transceiver of claim 22, wherein the first public key/private key pair is associated with a first access code and the controller comprises a second public key/private key pair for authentication, wherein the second public key/private key pair is associated with a second access code (see, e.g., [0034]; [0035], where the message type and object type identification correspond to the associated code).

Regarding claim 24, Thomas discloses:

The transceiver of claim 23, wherein the first public key/private key pair is used for

authentication in response to the host communicating the first access code to the

controller and the second public key/private key pair is used for authentication in

response to the host communicating the second access code to the controller (see, e.g.,

[0159]-[0161]).

Regarding claims 26 and 27, Thomas discloses:

The fiber optic transceiver of claim 25, wherein the means for receiving data signals

comprises means for converting optical serial data into electrical serial data (see, e.g.,

[0082]; [0146]).

Regarding claim 30, Thomas discloses:

The method of claim 29, wherein the authentication signal comprises a certificate

identification (see, e.g., [0031]; [0035]).

Regarding claim 31, Thomas discloses:

The method of claim 29, wherein analyzing the authentication signal comprises

decrypting the authentication signal using a public key of an issuing authority (see, e.g.,

[0165]).

Regarding claim 32, Thomas discloses:

A method for authenticating a transceiver, comprising:

installing a transceiver comprising a transceiver specific public key/private key pair,

wherein the transceiver specific public key is encrypted with a private key of an issuing

authority (see, e.g., [0159]; [0190];

requesting the encrypted transceiver specific public key from the transceiver (see, e.g.,

[0159]);

passing the encrypted transceiver specific public key from the transceiver to a host (see,

e.g., [0160]); and

decrypting the encrypted transceiver specific public key in the host using a corresponding

public key of the issuing authority to obtain the transceiver specific public key (see, e.g.,

[0160]-[0161]).

Regarding claim 33, Thomas discloses:

The method of claim 32 comprising:

generating an original authentication string in the host;

sending the original authentication string from the host to the transceiver;

encrypting the original authentication string in the transceiver using the transceiver

specific private key;

passing the encrypted authentication string from the transceiver to the host; and

decrypting the encrypted authentication string in the host using the transceiver specific

public key. See Fig. 11 and the explanations in paragraphs [0159]-[0161].

Regarding claim 34, Thomas discloses:

The method of claim 33 comprising:

comparing the decrypted authentication string to the original authentication string; and

selecting one of rejecting and accepting the transceiver based upon the comparison.

See paragraphs [0186] and [0187].

Regarding claim 35, Thomas discloses:

The method of claim 33, wherein the original authentication string is a random number

(see, e.g., [0031]; [0160]).

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

US Patent no. 7197298 B2 to Azuma.

US Patent no. 6052604 A to Bishop, Jr. et al.

US Patent no. 7149430 B2 to Hosking et al.

US Patent application Pub. no. 20040081079 A1 to Forest et al.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to ABDULHAKIM NOBAHAR whose telephone number is

(571)272-3808. The examiner can normally be reached on M-T 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Abdulhakim Nobahar/
Examiner, Art Unit 2132

March 27, 2008

/Benjamin E Lanier/
Primary Examiner, Art Unit 2132